

CLAIM AMENDMENTS

Claims 1-19. (canceled)

1 20. (Currently Amended) An apparatus for downhole
2 drilling of wells comprising:

3 a drilling unit comprising a drill bit for penetrating
4 into a rock formation to form a borehole therein reaching from a
5 surface to a downhole location,

6 a motor arranged to drive the drill bit;

7 a tubing upon which the motor and the drilling unit are
8 suspended;

9 and

10 ~~Pumping means~~ an electric pump disposed downhole for
11 drawing a drilling fluid from an annulus between the tubing and an
12 inner surface of the borehole, and up through a bore of the
13 tubing.

1 21. (Previously presented) An apparatus according to
2 claim 20 wherein the motor is an electric motor, and a cable means
3 is disposed along the tubing for energizing said motor.

Claims 22 and 23 (Cancelled)

1 24. (Currently amended) An apparatus according to claim
2 20 ~~wherein the pumping means includes~~ comprising at least two pumps
3 disposed downhole at different locations on the tubing.

1 25. (Currently amended) An apparatus according to claim
2 22 wherein the ~~pumping means includes a~~ pump is disposed in the
3 annulus upon the outer surface of the tubing.

1 26. (Currently amended) An apparatus according to claim
2 22 wherein the ~~pumping means includes a~~ pump is disposed in the
3 bore of the tubing.

1 27. (Previously presented) An apparatus according to
2 claim 20, further comprising motor and drill bit monitoring sensors
3 which monitor action of the motor and the drill bit.

1 28. (Previously presented) An apparatus according to
2 claim 20, further comprising directional sensors which monitor
3 position of the drill bit.

1 29. (Currently amended) An apparatus for downhole
2 drilling of wells comprising:

3 a drilling unit comprising a drill bit for penetrating
4 into a rock formation to form a borehole therein reaching from a
5 surface to a downhole location;

6 a motor arranged to drive the drill bit;

7 a tubing upon which the motor and the drilling unit are
8 suspended; and

9 pumping means for causing the drilling fluid to flow down
10 through a bore of the tubing, and up through an annulus between
11 the tubing and an inner surface of the borehole,

12 the pumping means including a pump disposed downhole.

1 30. (Previously presented) An apparatus according to
2 claim 29 wherein the motor is an electric motor, and a cable means
3 is disposed along the tubing for energizing said motor.

1 31. (Previously presented) An apparatus according to
2 claim 29 wherein the pumping means is an electric pump, and a cable
3 means is disposed along the tubing for energizing said motor.

1 32. (Previously presented) An apparatus according to
2 claim 29 wherein the pumping means includes a pump disposed in the
3 annulus upon an outer surface of the tubing.

1 33. (Previously presented) An apparatus according to
2 claim 29 wherein the pumping means includes a pump disposed in the
3 bore of the tubing.

1 34. (Previously presented) An apparatus according to
2 claim 29, further comprising motor and drill bit monitoring sensors
3 which monitor action of the motor and drill bit.

1 35. (Previously presented) An apparatus according to
2 claim 29, further comprising including directional sensors which
3 monitor a position of the drill bit.

1 36. (Currently amended) A method a downhole drilling
2 of wells comprising:

3 advancing a drill bit disposed on a tubing into a bore-
4 hole, the tubing having an inner flowpath, there being an annulus
5 between the tubing and the borehole, the inner flowpath and annulus
6 providing a circulation path from a top of the borehole to the
7 drill bit and back to the top of the borehole,

8 driving the drill bit using a motor disposed upon the
9 tubing,

10 supplying the drill bit with drilling fluid through the
11 circulation path, and

12 causing said drilling fluid to flow down the annulus and
13 then up the tubing using pump means including at least one electric
14 pump located downhole on the tubing.

1 37. (Previously presented) A method according to claim
2 36 wherein the pump means includes a pump disposed in the annulus.

1 38. (Previously presented) A method according to claim
2 36 wherein the pump means includes a pump disposed in the bore of
3 the tubing.

1 39. (Currently amended) A method according to claim 36
2 wherein ~~the pump means is an electric pump, and a cable means is~~
3 disposed along the tubing for energizing said pump.

1 40. (Previously presented) A method according to claim
2 36 wherein the pump means includes at least two pumps disposed
3 downhole at different locations on the tubing.

1 41. (Previously presented) A method according to claim
2 36 wherein the motor is an electric motor, and a cable means is
3 disposed along the tubing for energizing said motor.

1 42. (Previously presented) The method according to
2 claim 36 wherein motor and drill bit monitoring sensors monitor
3 action of the motor and drill bit.

1 43. (Previously presented) The method according to
2 claim 36 wherein directional sensors monitor the position of the
3 drill bit.

1 44. (Currently amended) An apparatus for downhole
2 drilling of wells comprising:

3 a drilling unit comprising a drill bit for penetrating
4 into a rock formation disposed on tubing to form a borehole in the
5 rock formation,

6 a motor arranged to drive the drill bit,
7 thruster means disposed upon the tubing and which engage
8 with an inner surface of the borehole to urge the tubing downwards,
9 [[and]]

10 a cable means disposed along the tubing for energizing
11 said thruster means, and

12 pump means including at least one electric pump located
13 downhole along said tubing for circulating fluid down an annulus
14 between the tubing and the borehole.

1 45. (Previously presented) An apparatus according to
2 claim 44 wherein the thruster means include at least two thruster
3 units disposed downhole at different locations on the tubing.

1 46. (Currently amended) An apparatus for downhole
2 drilling of wells comprising:

3 a drilling unit comprising a drill bit for penetrating
4 into a rock formation, disposed on tubing to form a borehole in the
5 rock formation,

6 a motor arranged to drive the drill bit,
7 pumping means including an electric pump located downhole
8 on said tubing that causes the drilling fluid to flow from an
9 annulus between the tubing and inner surface of the bore hole, and
10 up through a bore of the tubing,

11 formation sensors for determining characteristics of the
12 formation environment disposed upon the tubing, and

13 a cable means disposed along the tubing for energizing
14 said formation sensors.